



Tobacco Usage Pattern and Its Determinants among the Students of a Medical College in Kerala

Madhusudan M¹, Sudarshan BP², Sanjay TV³, Arun Gopi⁴, Gitanjali U⁵

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Author's Affiliation:

¹Assistant Professor; ²Associate Professor, Dept. of Community Medicine, DM Wayanad Institute of Medical Sciences, Kerala; ³Associate Professor, Dept. of Community Medicine, Kempegowda Institute of Medical Sciences, Bengaluru; ⁴Lecturer in Biostatistics; ⁵Undergraduate Student, Dept. of Community Medicine, DM Wayanad Institute of Medical Sciences, Kerala

Correspondence

Dr Sudarshan B P,
drsudhibp@gmail.com

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ABSTRACT

Background: Tobacco consumption by medical students could have negative impact on society. The study was conducted to assess the prevalence, pattern and determinants of tobacco use among the undergraduate medical students and also their awareness towards the harmful effects of tobacco use.

Methodology: This was a cross sectional observational study conducted among the undergraduate medical students of the DM Wayanad Institute of Medical Sciences, Wayanad between March-August 2017. Sample size was 400. Data were collected using a pre designed, pre tested, self administered questionnaire.

Results: 18.8% were ever users and 11.8% were current users of tobacco. Current use of tobacco was higher among males compare to female, NRI quota students compared to other quota students and those with a family history of tobacco use compared to those without and all these associations were found to be statistically significant ($P < 0.01$ for all). Average amount spent on tobacco use was Rs. 54.02±9.88 per day. The most common reason for initiating tobacco use was peer pressure (57.4%), followed by desire to experiment (48.9%) and stress relief (34%). 27.8% had inadequate knowledge about the harmful effects of tobacco use.

Conclusions: The prevalence of both ever use and current use of tobacco was lower in this study. Male sex, NRI quota of admission and presence of family history of tobacco were found to have a significant association with current use of tobacco.

Keywords: Tobacco usage, medical students, Kerala, Wayanad

INTRODUCTION

Tobacco is the leading preventable cause of untimely death and disease worldwide. It remains a serious threat to global health, killing nearly 7 million people each year and causing hundreds of billions of dollars of economic harm annually in the form of excess health-care costs and lost productivity. WHO estimates that if current trends continue, by 2030 tobacco will kill more than 8 million people worldwide each year, with 80% of these premature deaths among people living in low and middle-income countries.¹ In India, each year more

than 8 lakh people die and 12 million people become ill as a result of tobacco use²

The youth in general and students in particular are more prone to fall prey to this deadly habit, owing to increase in academic pressure, uncertain career and other kinds of stress in life. Teaching about the effects of tobacco use and related diseases is essential for medical students, because they would be the future physicians and shall serve as role models for healthy behaviour to the society.³ They can help to educate the population about tobacco, support anti-tobacco policies and also influence national and global tobacco control efforts.⁴

However, medical students who are the future health professionals can have negative impact on society if they themselves are involved in tobacco consumption practice. It has been reported that there is an increased trend of tobacco habits among the students pursuing healthcare education like any other youths. Little attention has been given to the context of when and how healthcare students undergo attitudinal and behavioural changes with respect to their own smoking habits.⁵ In this context, the present study was undertaken to assess the prevalence, pattern and determinants of tobacco usage among the undergraduate medical students and also their awareness towards the harmful effects of tobacco use.

MATERIALS AND METHODS

This was a cross sectional observational study conducted among the undergraduate medical students of the DM Wayanad Institute of Medical Sciences, Wayanad between March-August 2017. After seeking approval from the college administration, the students were approached in their classes and the purpose of the study was briefed. Confidentiality of the data was ensured and verbal informed consent was taken. Participation in the study was voluntary and data were collected using a pre designed, pre tested, self administered questionnaire which was distributed among the students. It was designed after reviewing different studies that have been mentioned in the references. The questionnaire was then pilot tested on a group of students not part of this study to check whether the questions were specific and yielded the desired responses. After modifications, the questionnaire was face validated with the help of an expert in the field of mental health. Corrections were incorporated and the final version was used. The respondents were asked not to mention their names for maintaining anonymity and also to encourage participation and elicit truthful response. Students absent on the day of study were excluded hence questionnaires could be distributed to only 400 students.

The information were collected regarding age, sex, religion, place of origin, age of initiation of tobacco, precipitating factor for the initiation, form of product used, frequency of use, tobacco use in family, and awareness of harmful effects of tobacco. The data was entered in MS excel and analyzed using excel and SPSS v 21. Association between independent factors and dependent factors was determined using chi-square test. *P*-value < 0.05 was considered significant for all tests.

Operational definitions: "Ever use" was defined as 'having used tobacco even once in their lifetime'.

"Current use" was defined as 'having used tobacco at least once in the last 30 days preceding the survey'. "Never use" was defined as 'having not used tobacco even once in their lifetime'.⁶

Those respondents who were aware about adverse effects of tobacco pertaining to at least 2 systems were considered to have good knowledge; those aware about adverse effects of tobacco pertaining to at least 1 system were considered to have moderate knowledge and those who were not aware about any adverse effects of tobacco were considered to have inadequate knowledge

RESULTS

Out of the total 400 respondents, 109 (27.25%) were from Phase I MBBS, 209 (52.25%) from phase II and 82 (20.5%) from final phase. 129(32.25%) were males and 271 (67.75%) females. Mean age of the respondents was 20.91+2.76 years

Overall 75 (18.8%) had ever used tobacco of which 66 (88%) were males and 9(12%) were females. 325 (81.2%) had never used tobacco of which 63 (19.4%) were males and 262(80.6%) females. There was a statistically significant association between sex and ever use of tobacco (*P*<0.01)

Table 1: Determinants of tobacco use

Variable	Current users	Current non users	Total	<i>P</i>
Sex				
Male	41(31.8)	88(61.2)	129	<0.01
Female	6(2.2)	265(97.8)	271	
Phase of MBBS				
I	13(11.9)	96(88.1)	109	0.618
II	22(10.5)	187(89.5)	209	
Final	12(14.6)	70(85.4)	82	
Quota of admission				
Government	15(7)	199(93)	214	<0.01
Management	24(16.2)	124(83.8)	148	
NRI	8(21.1)	30(78.9)	38	
Religion				
Hindu	19(10.4)	164(89.6)	183	0.815
Muslim	18(12.9)	122(87.1)	140	
Christian	10(13.3)	65(86.7)	75	
Others	0(0)	2(100)	2	
Place of Origin				
Urban	20(9.8)	184(90.2)	204	0.218
Rural	27(13.8)	169(86.2)	196	
Family history				
Present	23(26.4)	64(73.6)	87	<0.01
Absent	24(7.7)	289(92.3)	313	

Overall 47(11.8%) were current users of tobacco and 353(88.2%) were current non users. Out of the current users 45(11.3%) were using smokable forms, 1(0.3%) smokeless form and 1(0.3%) both. Cigarette was the only smokable form used and

average numbers of cigarettes smoked per day by current users were 3.28 ± 0.88 . The mean age of starting the use of tobacco among current users was 18.19 ± 0.6 years and average amount spent on tobacco use was Rs 54.02 ± 9.88 per day. Average duration of tobacco usage among current users was 32.26 ± 7.14 months. Current use of tobacco was higher among males compared to females, NRI quota students compared to government and management quota students and those with a family history of tobacco use compared to those who without and all these associations were found to be statistically significant ($P < 0.01$ for all). Current use of tobacco was not found to have any statistically significant association with phase of study, religion and place of origin ($P = 0.618, 0.815$ and 0.218) [table 1].

The most common reason for initiating tobacco use was peer pressure [27(57.4%) subjects], followed by desire to experiment 23 (48.9%), stress relief 16(34%), to show off 12 (25.5%) and siblings/ parents using tobacco 4 (8.5%) [Multiple responses present]. 110 (27.5%) respondents had a good knowledge about the harmful effects of tobacco usage, 179 (44.8%) moderate knowledge and 111 (27.8%) inadequate knowledge.

DISCUSSION

In the present study the prevalence of tobacco ever use was 18.8%. Similar figures were reported by other researchers i.e., 21.7%, 24%, 22.7% and 14.7%.^{5,7,8,9} However another study reports it to be 41.7%.¹⁰ The difference could be due to cultural and socio-demographic differences between the two study populations. The prevalence of current use of tobacco in this study was 11.8% which is similar to that of other studies where it was 11.1% and 14.5%.^{5,11} However a few other studies have reported higher prevalence i.e. 25.8%, 33% and 28.8%^{10,12,13}. The difference could be due to cultural and socio-demographic differences between the study populations. Also Mehrotra et al., have used only 3rd and 4th semester students of consecutive batches as their study subjects unlike our study where students from all the three phases were involved and Kumari et al., have involved only male subjects unlike our study where both and females were involved. The prevalence of current use of tobacco was higher among males compared to females in the current study. Similar findings were reported by other studies^{5,10,11} The current study reports higher prevalence of tobacco use among NRI quota students compared to management and government quota students. This could be due to differences in cultural and socio economic background between the NRI quota students and others. No statistically significant association was

found between the phase of study and the prevalence of tobacco use. However other studies have reported a statistically significant association between the phase of study and tobacco use with highest prevalence among final phase students.^{5,10,11} The reasons for this could be increased academic pressure and stress in the final phase. No statistically significant association was found between the place of origin and current use of tobacco. Similar findings were reported by other studies.^{13,15} This suggests that the epidemic has affected both rural and urban areas alike. However Das et al., have found a statistically significant association between the place of origin and current use of tobacco with the prevalence more among students from rural background.¹⁰ There was a statistically significant association between family history of tobacco usage and current use of tobacco which was similar to the findings of other studies.^{5,10} This highlights the role, elders in the family can have in influencing the habits of the children in the family.

The use of smokable forms was more compared to smokeless forms in the current study which was similar to the findings of other studies.^{10,13,14} The mean age of starting the use of tobacco among current users in the current study was 18.19 ± 0.6 years. Other studies have also documented that majority of the users had initiated tobacco use in the 16-20 years age group.^{5,10,15} Hence this age group has to be targeted more aggressively through behavior change strategies. Average amount spent on tobacco use in the current study was Rs 54.02 ± 9.88 per day. Another study reports that majority of the students (39.4%) were spending Rs. 201-500 per month towards tobacco use followed by 28% spending Rs. 101-200 per month.¹⁶ This suggests that there is a considerable increase in the amount spent on tobacco use by medical students in the last 2 years. Average duration of tobacco usage among current users was 32.26 ± 7.14 months. Another study also noted that majority (48.5%) of the medical students were using tobacco for the past 1-5 years.¹⁶

The most common reason for initiating tobacco use among current users was peer pressure which is similar to the findings of other studies.^{13,15} Only 72.3% of the respondents had knowledge about the harmful effects of tobacco usage in comparison to 81.1%, 90.76% and 89.53% in other studies.^{10,11,17} When this is the case with medical students themselves, the knowledge amongst the general population would be still low. Hence there is a need for more aggressive IEC activities in this regard.

The limitations of the study are that it is based on medical students of one particular college only and

hence the findings cannot be generalized to the entire country or world.

CONCLUSIONS

The prevalence of both ever use and current use of tobacco was lower in this study compared to other studies. Male sex, NRI quota of admission and presence of family history of tobacco use were found to have a significant association with current use of tobacco. The use of smokable forms was more compared to smokeless forms. The amount spent on tobacco use per day was substantially higher compared to other studies. The most common reason for initiating tobacco use was peer pressure, followed by desire to experiment and stress relief. More than a quarter of the students had inadequate knowledge about the harmful effects of tobacco usage.

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